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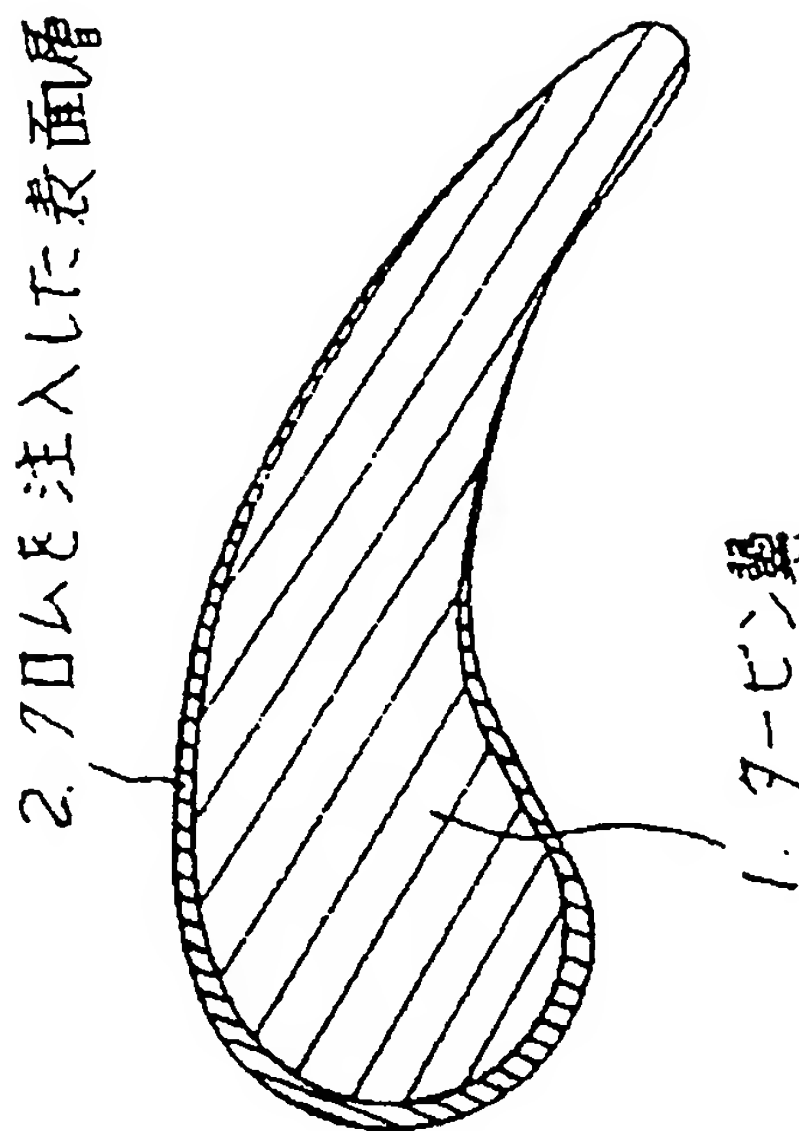
APPLICATION DATE : 24-01-86
APPLICATION NUMBER : 61013336

APPLICANT : MITSUBISHI HEAVY IND LTD;

INVENTOR : ONO SHUJI;

INT.CL. : C23C 14/48 F01D 5/28 // D01F 9/08

TITLE : TURBINE VANE



ABSTRACT : PURPOSE: To prolong the life of a turbine vane by implanting ions of a specified element into the surface of a fiber reinforced metal such as Al or Ti alloy reinforced with whiskers so as to improve the erosion and corrosion resistances of the resulting turbine vane.

CONSTITUTION: Ions of 1-3 kinds of elements selected among Cr, Ti, Mo, W, Ni, Si, C, N, O, B, Ba, Ca, Y, Al, Zr and Sr are successively implanted into the surface of a metallic composite material for a turbine vane 1 at about 50-500keV acceleration voltage by about 10^{14} - 10^{19} ions/cm². The metallic composite material is a fiber reinforced metal obtd. by reinforcing an Al or Ti alloy as a base alloy with ceramic filaments or whiskers of one or more among B, SiC, C and Al₂O₃. Thus, a turbine vane having an erosion and corrosion resistant surface layer (e.g., a CR implanted surface layer) 2 is obtd.

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PATENT ABSTRACTS OF JAPAN(21) Application number: **61013336**(51) Intl. Cl.: **C23C 14/48 F01D 5/28**(22) Application date: **24.01.86**

<p>(30) Priority:</p> <p>(43) Date of application publication: 31.07.87</p> <p>(84) Designated contracting states:</p>	<p>(71) Applicant: mitsubishi Heavy Industries Ltd</p> <p>(72) Inventor: MURAKAMI YUICHI YAMAOKA TAKASU ONO SHUJI</p> <p>(74) Representative:</p>
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(54) TURBINE VANE**(57) Abstract:**

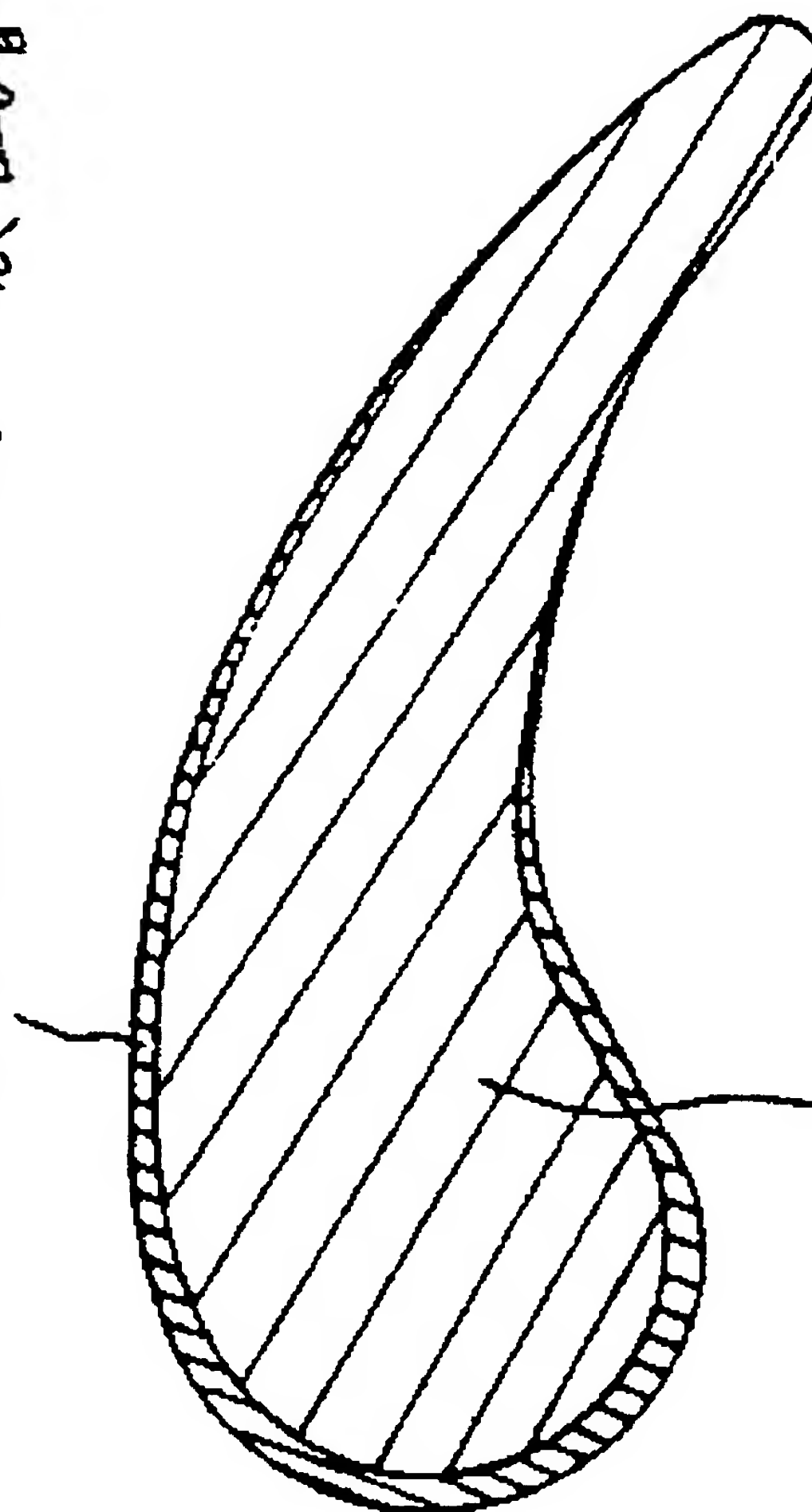
PURPOSE: To prolong the life of a turbine vane by implanting ions of a specified element into the surface of a fiber reinforced metal such as Al or Ti alloy reinforced with whiskers so as to improve the erosion and corrosion resistances of the resulting turbine vane.

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2. 70μmを注入した表面層



1. 7-7合金